

DOCKET NO. SC11493TH

## REMARKS

In an Office Action mailed April 7, 2004, pending claims 1-23 were examined. Claims 1-4, 6-11, 14-16, 18, 20 and 23 were rejected and claims 5, 12, 13, 17, 19, 21 and 22 were objected to as being allowable if rewritten in independent form with all of the base claim limitations and any intervening claims. In response, Applicants are herein amending claims 3, 4, 12-15 and 17-21 and respectfully request the reconsideration and allowance of claims 1-23, thereby placing the application in condition for allowance.

Claims 3, 4, 14 and 15 were rejected under 35 U.S.C. 112, second paragraph. While Applicants submit that claim 3 is clear and unambiguous as filed because there is no uncertainty between the recited "value" and "predetermined value", Applicants are amending claim 3 regarding matters directed to form rather than to patentability. Claim 3 is herein amended to further distinguish between the recited "value" and the "predetermined value" of claim 1 by reciting that "the value" is compared with the "predetermined value". Similar amendments related solely to form are requested for claims 4 and 12. Claim 14 which is dependent on claims 13 and 1 was rejected for lack of antecedent basis of the terms "the change of control" and "the means for executing". Both of these recitals are introduced in claim 1. On page 27, at line 8 is found a "means for executing" and on page 27, line 18 is found "implementing a change of control". While not needed to overcome the rejection, claim 14 is herein amended as to form to fully recite the phrases as "means for executing the first

DOCKET NO. SCI 1493TH

instruction" and "a change of control in the program execution". Claim 15 which is dependent on claims 13 and 1 was rejected for the same basis as used in connection with the rejection of claim 14. While not required to overcome the rejection, claim 15 is amended as to matter of form only to fully recite that the "change of control" is a "change of control in the program execution". Accordingly, Applicants request the reconsideration and the withdrawal of the rejection of claims 3, 4, 14 and 15 and the allowance thereof.

Claims 1, 2, 3, 6, 7, 18, 20 and 23 were rejected under 35 U.S.C. 102(b) as being anticipated by Emma et al. (U.S. Patent 5,434,985). Emma et al. disclose a system that simultaneously predicts multiple branches. The program flow of FIG. 3 of Emma et al. was used as a technical basis for the rejection. In particular, at page 3 of the Office Communication, the recited first instruction of claim 1 was stated to be at address B+b. The rejection stated that a second address C is provided if a comparison of the value with a predetermined value has a first result. The condition, cond, in the instruction is stated to be (I-J) and the comparison is whether (I-J) is greater than 0. A third address is stated to be provided if the comparison has the second result of "equal to or less than 0". The third address was not explicitly stated in the rejection basis of the Office Communication. The third address was stated to not be contiguous to address B+b. Further, there was no citation to the Emma et al. document on page 4 of the Office communication that implied or stated that a change of control in the program execution is always implemented in response to executing the first instruction. The claim 1 limitation "always implementing a

DOCKET NO. SC11493TH

change of control in the program execution in response to executing the first instruction" is not taught or suggested by Emma et al.

A description by Emma et al. of the conditional branch operation at address B+b used by the Examiner is provided at Col. 11, lines 49-64. As stated therein FIG. 3 of Emma et al. teaches a program having branch groups, each being sequential instructions that ends in a taken branch that causes a jump to the beginning of a new branch group. Lines 59-64 describe the operation of the specific address and instruction used to form the rejection of claims 1, 2, 3, 6, 7, 18, 20 and 23. In particular, "At an offset of b instructions from address B, there is a conditional branch that may be taken to address C, or it may fall through to a next sequential instruction" (emphasis added). In an unequivocal explanation, Emma et al. teach that the first instruction at address B+b analogized in the rejection to be the recited "first instruction" of claim 1 is a conditional branch that "may be taken" to a branch address C "or it may fall through to a next sequential instruction". It is clear that in the Emma et al. system that the conditional branch associated with the instruction at address B+b is not taken if the condition is not met. Emma et al. do not teach or suggest the claim 1 recital of "always implementing a change of control in the program execution in response to executing the first instruction by redirecting program execution to the jump address". Emma et al. do not teach or suggest any motivation for using an instruction in a data processing system in which when the instruction is executed a change of control is always implemented. Similarly, in claim 18 there is recited that "execution of the predetermined

DOCKET NO. SC11493TH

processing instruction always implementing a change of control in program execution". Similarly, in claim 23 there is recited that "the software processing instruction always causing a change of control in program execution by redirecting program execution in the data processing system to the jump address". Applicants request the withdrawal of the stated rejection of independent claims 1, 18 and 23 and dependent claims 2, 3, 6, 7 and 20 some of which were rejected as being "inherent" rather than on the basis of specific prior art citations. For example, in claim 6 it is not inherent that the recited second address and third address are within a range of addresses that is less than a total range of addresses of the system. It is not apparent why these addresses could not be any address within the system address range and inherency does not teach or suggest the claim recital. It is also not inherent why the recited value to be compared would be implemented as a count value in a counter that would vary as the counter functions. Applicants therefore request the allowance of all of these rejected claims.

Claims 8, 10, 11 and 16 were rejected under 35 U.S.C. 103(a) as being unpatentable over Emma et al. (U.S. Patent 5,434,985) in view of Stallings (Stallings, William, "Computer Organization and Architecture", pages 581-583, 5<sup>th</sup> edition, 1999). Each of claims 8, 10, 11 and 16 is dependent from claim 1 and is therefore distinguishable over Emma et al. for the reasons provided above. For example, Emma et al. do not teach or suggest "providing a storage device" as recited in claim 8 and dependent claims 10 and 11 or in claim 16. While storage devices are common in the literature for storing instructions grouped

DOCKET NO. SCI11493TH

in various groupings, Stallings does not teach the recited system of these dependent claims that have groupings to optimize instruction execution involving a change of control as recited. Applicants respectfully request the reconsideration of claims 8, 10, 11 and 16 which depend from claim 1, as amended herein, and the withdrawal of the stated rejection.

Claim 9 was rejected under 35 U.S.C. 103(a) as being unpatentable over Emma et al. in view of Stallings as applied to claims 8, 10, 11 and 16, above, and further in view of Griesemer (U.S. Patent 6,021,273). Griesemer is cited for the proposition of teaching Java bytecode. Applicants are reciting in claim 9 a unique system that is used in connection with change of control execution of Java bytecode. While numerous references contemplate the execution of Java bytecode, this combination of references does not teach the recited system having the limitations of claims 1, 8 and 9 in combination. Applicants request the reconsideration and withdrawal of the rejection of claim 9.

Claims 4, 5, 12-15, 17, 19, 21 and 22 were indicated to be allowable if rewritten to independent form. In response, Applicants have placed claims 13, 17 and 19 in independent form and request the allowance thereof. Additionally, claim 20 is placed in independent form including the base limitations thereof and a more general recital of the function of the recited "control signal" of allowable claim 21. Therefore, Applicants request the allowance of claim 20.

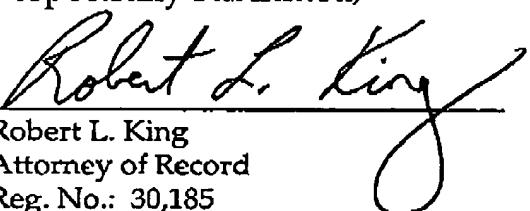
Applicants respectfully request consideration of the amendments and the allowance of claims 1-23, thereby placing the application in

DOCKET NO. SC11493TH

condition for allowance. Should issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned at (512) 996-6839.

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